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10/015,564	12/17/2001	Takaaki Kutsuna	011709	6229

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EXAMINER

SELLERS, ROBERT E

ART UNIT PAPER NUMBER

1712

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/015,564

Applicant(s)

KUTSUNA ET AL.

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 26, 28 and 30-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 26 and 28 is/are allowed.
- 6) ☒ Claim(s) 30-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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1. The amendment after Final rejection filed July 24, 2006 has been entered.

Although claims 31-58 have been deemed to be allowable by the previous examiners, the differences in scope between independent claims 26 (compostion), 31 and 34 (coated films) along with 38 and 48 (multilayered laminates necessitates further searches for the permutations specific to each independent claim. Accordingly, the Final rejection is hereby vacated as well as the allowability of claims 31-58 and the following new grounds of rejection are advanced.

2. The language in claims 31 and 34, lines 1 and 2 of "A coated film having a gas barrier property coated a gas barrier layer on at least one side of a flexible polymer film" would be more grammatical correct if reformulated as "A coated film having a gas barrier property **comprising** a gas barrier layer **coated** on at least one side of a flexible polymer film."

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 31-58 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/516,956. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application are directed to a gas-barrier container (claim 1) comprising at least one gas-barrier layer prepared from epoxy resins derived from m-xylylenediamine (claim 3) and a curing agent prepared from m- or p-xylylenediamine, an acyl group(s)-containing compound and a C<sub>1</sub>-C<sub>8</sub> monocarboxylic acid (claim 6). Claims 8-14 define a gas-barrier laminated film containing at least one flexible polymer layer and a gas barrier layer produced from an epoxy resin and the curing agent described hereinabove (claim 12).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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4. Claims 31-58 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,861,147. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the patent set forth a gas barrier film coated on a single layer or multilayer film (claim 1) wherein the gas barrier film comprises an epoxy resin derived from m-xylylenediamine (claim 6) and a curing agent prepared from m- or p-xylylenediamine, an acyl group(s)-containing compound and a C<sub>1</sub>-C<sub>8</sub> monocarboxylic acid (claim 5). Claims 10-21 denote a gas barrier film interposed between two layers to form a laminated film wherein the gas barrier film contains an epoxy resin derived from m-xylylenediamine (claim 17) and the curing agent described hereinabove (claim 21).

5. Claims 31-58 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, 7 and 13-27 of copending Application No. 10/488684. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application are drawn to a laminated film (claim 13) prepared by an adhesive composed of an epoxy resin derived from m-xylylenediamine (claims 3 and 18) and a curing agent obtained via the reaction of m- and/or p-xylylenediamine, an acyl group(s)-containing compound and, optionally, C<sub>1</sub>-C<sub>8</sub> monocarboxylic acid(s) (claims 6, 20 and 22) applied to a film material and laminating another film thereto.

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6. Claims 26 and 28 are deemed to be allowable since none of the cited prior art recites the claimed reactant (C) used to prepare the amine curing agent. Claims 34-37 and 48-58 would also be allowable contingent upon the resolution of the obviousness-type double patenting rejections advanced hereinabove since independent claims 34 and 48 also require reactant (C).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-33 and 38-47 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Japanese Patent Nos. 8-104738 (Japanese '738), 63-301264

(Japanese '264) and 47-30640 (Japanese '640) and Great Britain Patent No. 2,112,388

in view of Carlblom et al. Patent No. 5,728,439 and Huang et al. Patent No. 3,683,044.

7. Japanese '738 (abstracts and translation, page 2, paragraph 7) reports a coating film (abstracts) comprising an epoxy resin and either a reaction product of xylylenediamine and a carboxyl group-containing compound such as a dimer acid (page 4, paragraph 27, Amine C) or a Michael reaction product of xylylenediamine and an acrylic compound such as methyl methacrylate (page 5, paragraph 30, Amine F).

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8. Japanese '264 sets forth a coating composition (abstracts and partial translation, page 1) containing a polyglycidylamine epoxy resin (page 2, line 3), a polyamideamine derived from xylylenediamine and a polymerized fatty acid (page 2, lines 14-18) and the reaction product of xylylenediamine and an acrylic compound such as methyl methacrylate (Derwent abstract).
9. Japanese '640 (CAPLUS abstract) espouses a blend of an epoxy resin and an amideamine hardener produced from m-xylylenediamine and methyl acrylate.
10. The British patent is directed to a formulation "used for a wide range of purposes (page 1, lines 41-43)" such as adhesives (page 2, line 2) obtained from the reaction product of especially preferably m-xylylenediamine (page 1, lines 78-79) and preferably maleic acid (page 1, line 59) and epoxy resins derived from aromatic amines (page 2, lines 14-17).
11. The claimed coated film of claims 31-33 wherein the coating is applied to at least one side of a flexible polymer film, and the multilayer laminate wherein the intermediate layer is interposed between two outer layers of claims 38-47 are not recited.

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Carblom et al. Patent No. 5,728,439 (col. 3, lines 38-43) teaches a blend of an initial polyamine such as m-xylylenediamine (col. 6, line 5) and "any epoxide known to those skilled in the art which can react with polyamine (A) to form gas barrier coating compositions (col. 7, lines 19-22)" such as N,N,N',N'-tetrakis(oxiranylmethyl)-1,3-benzenedimethamine (col. 6, lines 28-30, e.g. TETRAD X which contains a m-xylylenediamine moiety. The blend can be applied over a gas-permeable packaging material or utilized as a gas barrier coating layer between two layers of a gas-permeable packaging material (col. 17, lines 16-27).

12. It would have been obvious to employ the compositions of Japanese '738, '264 and '640 and the British patent as a coating on a gas-permeable packaging material or a gas barrier coating layer between two layers of a gas-permeable packaging material as per Carblom et al. in order to:

1) Take advantage of the benefits accruing from the modification of xylylenediamine with a carboxyl group-containing compound or an acrylic compound such as no blushing, high water resistance and internal bond strength between coated layers and excellent gloss, transparency and smoothness (Japanese '738, Derwent abstract, Advantage section).

2) Apply thicker coatings, provide good workability in a wet environment and excellent film properties (Japanese '264, Derwent abstract, Use/Advantage section).

3) Improve the heat resistance (Japanese '640).

4) Enhance the high temperature and water resistance and provide a higher glass transition temperature (British patent, page 1, lines 36-41).



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13. The claimed epoxy resin derived from m-xylylenediamine is not recited, although Japanese '264 and the British patent acknowledge the suitability of polyglycidylamines. Huang et al. describes a polyglycidyl xylylenediamine mixed with "curing agents customarily used for curing of glycidyl compounds (col. 4, lines 37-39)" employed as a coating or adhesive (col. 5, lines 25-29).


14. It would have been obvious to utilize the polyglycidyl xylylenediamine of Carlblom et al. and Huang et al. as the epoxy resin of Japanese '738, '264, '640 and the British patent in order to improve the gas barrier properties (Carlblom et al., col. 6, lines 28-30; col. 7, lines 19-29 and col. 19, Example II) and to lower the viscosity and increase the heat resistance (Huang et al., col. 5, lines 25-29).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Related Kutsuna et al. Patent No. 7,018,715 claims an organic coated steel with an epoxy resin layer formed from the claimed composition. However, the steel is not within the flexible polymer film of instant claims 31-37 and it is not interposed between two outer layers as required by claims 38-58. There is no steel layer to which the composition of claims 26 and 28 are applied.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

rs  
7/31/2006



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PRIMARY EXAMINER